

DOCKET: NOVE100042000

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

In re:

INVENTOR:	Robert Martinson et al.)	EXAMINER:	Michael A. Band
)		
SERIAL NO.:	10/823,355)	ART UNIT:	1753
)		
FILING DATE:	April 12, 2004)	DATE:	April 9, 2007
FOR:	Moving Interleaved Sputter Chamber Shields			

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY BRIEF FOR APPELLANTS

This is in reply to the Examiner's Answer mailed February 11, 2008.

Please charge any over or under payment to the undersigned's Deposit Account No. 04-0566.

A. Claims 1, 14 and 20

The Examiner admits that "the [Chung] reference fails to explicitly state how the wafer is loaded." Answer, p.4. However, the Examiner goes on to take the position that "[I]t is either inherent or obvious in the design to remove part [48] via the connector pin seen connecting part [48] and part [54] together. Removing part [48] in fig. 6A would leave sufficient distance to load the wafer horizontally (col. 6, lines 49-51) onto the pedestal." Id. However, the Examiner offers no affidavit or other evidence to support either the inherency or obviousness arguments.

"To serve as an anticipation when the reference is silent about the asserted inherent characteristic, such gap in the reference may be filled with recourse to extrinsic evidence. Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991). See also *EMI Group N. Am., Inc. v. Cypress Semiconductor Corp.*, 268 F.3d 1342, 60 USPQ2d 1423, 1429 (Fed. Cir. 2001) and *Glaxo Inc. v. Novopharm Ltd.*, 52 F.3d 1043, 34 USPQ2d 1565, 1567 (Fed. Cir. 1995) ("The disclosure need not be express, but may anticipate by inherency where it would be appreciated by one of ordinary skill in the art." (citing *Continental Can*)). Moreover, "[i]nherency ... may not be established by mere probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *In re Oelrich*, 666 F.2d 578, 581, 227 USPQ 323, 326 (CCPA 1981) (emphasis in original). The Examiner has given no "clear articulation of the reason(s) why the claimed invention would have been obvious", as required under the PTO's *Examining Guidelines for Determining Obviousness*. Federal Register, Vol. 72, No. 195, p.57528.

There is simply no evidence in the Chung patent or elsewhere that the concept of removing the pin shown connecting parts 48 and 54 is "necessarily present" or that one of ordinary skill in the art would recognize that one may or would remove the pin to load the wafer horizontally. Moreover, the Examiner has not explained how, if part 48 (the alleged sidewall shield) were removed, the Chung reference would meet the claim limitation that the sidewall shield lower end is above the pedestal, when the

pedestal is in the lowered position, since, of course, part 48 is no longer present in the chamber.

The Examiner also takes the position that "both part [46] and part [48] are sidewall shields" Answer, p.7. This still begs the question of how one of ordinary skill in the art would unload the wafer horizontally when the pedestal is in the lowered position when shield 48 clearly blocks the path.

While undoubtedly one may in theory disassemble anything, this hypothetical does not meet the requirements for a *prima facie* case of anticipation or obviousness of claims 1, 14 and 20 by Chung.

B. Claims 6, 7, 17 and 18

The Examiner has cited Chung's Fig. 6A as disclosing that shielding ring 84 has "an upper portion surrounding the pedestal and a lower portion pointing downward." Answer, p.5. The Examiner also cites Fig. 6B, part 46 of Chung as disclosing that part 48 has "an upward portion that extends outward" and part 46 has "an outward portion between the chamber sidewall and the sidewall shield lower end disposed outward of the pedestal shield outward position when the pedestal shield is raised." Answer, p.5.

Items 46 and 48 are sidewall shields, and are not pedestal shields as defined in appellants' claim. The Examiner can cite nothing in Chung that discloses or suggests a pedestal shield that includes an outward portion extending upward and away from the pedestal shield lower portion. As such, claims 6, 7, 17 and 18 are not anticipated by or obvious from Chung.

C. Claim 9

The Examiner states that Chung Fig. 6B shows that the "pedestal shield extends outward from the pedestal [82] toward the chamber sidewalls and below the sidewall

shield lower end." Answer, p.6. In taking this position, the Examiner apparently forgets that he also has taken the position that part 48 is also part of the sidewall shield. Answer, pp.7-8.

Since part 48 extends lower than part 46, Chung's pedestal shield does not extend outward from the pedestal toward the chamber sidewalls and below the sidewall shield lower end, as required by claim 9. In all cases, Chung's pedestal shield is above the lower end of chamber shield 48. Accordingly, claim 9 is not anticipated by or obvious from Chung.

D. Claim 11

According to the Examiner, part 48 in Fig. 6A now corresponds to the "bottom wall shield" of appellants' claim 11. Answer, p.6. However, it is clear that part 48 does not have a lower portion extending along the chamber lower wall as required of the claimed bottom wall shield.

In taking this position, the Examiner does not explain how part 48 can still be the sidewall shield that has a lower end above the pedestal when the pedestal is in the lowered position. (See claim 1, above.) Moreover, the Examiner has previously disassembled part 48 and completely removed it from the chamber in order to meet the limitation that the wafer may be horizontally loaded onto the pedestal. Apparently multipurpose part 48 can simultaneously not be present in the chamber, since it was removed by the Examiner, but still function as a sidewall shield and a bottom wall shield that meets every limitation of both in claim 11.

The Examiner attempts to explain away this contradiction by stating "sidewall shield [48] extends downward along a sidewall until reaching a 90° angle, at which point said sidewall shield [48] extends along a chamber floor (i.e. bottom wall)."

Answer, p.8. If this is the case, then the part 48, functioning as the bottom wall shield, does not have an "outward portion extending outward of the pedestal shield lower portion" since this portion of part 48 is identified by the examiner as the sidewall shield, not the bottom wall shield.

The Examiner has clearly not made any credible showing that claim 11 is anticipated by or obvious from Chung.

For the reasons given above and in their main brief, appellants submit that the claims of the instant application are not anticipated by/obvious from the cited prior art Chung patent. Reversal of the rejections under 35 USC §§ 102 and 103 is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Peter W. Peterson', written over a horizontal line.

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